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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/549,459	09/16/2005	Frank Michel	05-573	8340

34704 7590 04/19/2007
BACHMAN & LAPOINTE, P.C.
900 CHAPEL STREET
SUITE 1201
NEW HAVEN, CT 06510

EXAMINER

DAVIS, OCTAVIA L

ART UNIT	PAPER NUMBER
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2855

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/19/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/549,459

Applicant(s)

MICHEL, FRANK

Examiner

Octavia Davis

Art Unit

2855

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 26-49 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 26-49 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 9/16/05 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>9/16/05, 4/18/06</u> | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Acknowledgement is made of applicant's preliminary amendment filed 9/16/05.

Claim Objections

1. Claims 26 - 28 are objected to because of the following informalities: In claims 27 and 28, on line 1 respectfully, "The" lacks antecedent basis. Appropriate corrections are required.

In claims 26 - 49, the phrase "and/or" renders the claims indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 26, 27, 29 - 32, 35, 38 and 42 - 45 are rejected under 35 U.S.C. 102(b) as being anticipated by Casler (5,015,926).

Regarding claims 26 and 27, Casler discloses an electronically controlled force application mechanism for exercise machines comprising an input drive shaft 38, 52, an output drive shaft 40, and a housing 32, 34, 36 on which a centering flange(s) 20b, 52a, 54a is provided, wherein the

Art Unit: 2855

housing is provided with at least one associated strain sensor 60 and an electronics device 70 including a display 90 (See Col. 4, lines 62 – 68 and Col. 6, lines 5 – 12, 34 – 45 and 55 – 65)

Regarding claim 29, the at least one strain sensor 60 is arranged close to the flange 54a (See Fig. 1).

Regarding claim 30, the strain sensor 60 is close to the housing 32, 34, (See Fig. 1).

Regarding claim 31, the strain sensor 60 is arranged in a cylindrical area 54 of the attachment flange 54a (See Col. 6, lines 34 – 45, See Fig. 1).

Regarding claim 32, the strain sensor 60 is arranged close to attachment screw holes 40d in the attachment flange 52a (See Col. 5, lines 44 – 48, See Fig. 1).

Regarding claim 35, the attachment flange 52a is at least partially coaxially separated by a member B2 from a casing surface of the housing 32, 34, 36 (See Col. 5, lines 28 – 34).

Regarding claims 38 and 42 – 45, the strain sensor 60 is in the form of a strain gage and is connected to an evaluation unit 70, 80 and in indicating device 90 from which data is read (See Col. 6, lines 39 – 54).

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 28 and 46 – 49 are rejected under 35 U.S.C. 102(b) as being anticipated by Matsushima et al (6,066,907)

Art Unit: 2855

Regarding claim 28, Matsushima et al disclose a brush holding device comprising an electric motor 2, an input drive shaft 9a, an output drive shaft 3, and a housing 4 on which a centering flange 8 is provided, wherein the centering flange has at least one radially circumferential groove 23 in which at least one damping element 24 is inserted (See Col. 2, lines 66 – 67, Col. 3, lines 1 – 7 and 64 – 67 and Col. 4, lines 1 – 19).

Regarding claims 46 and 47, the damping element 24 is in the form of an elastically deformable rubber element and O-ring (See Col. 3, lines 64 – 67 and Col. 4, lines 1 – 6).

Regarding claim 48, a plurality of circumferential grooves 23 are provided that are spaced apart from one another and are parallel to one another, and are provided in the flange 8 for insertion of a plurality of damping elements 24 (See Fig. 15).

Regarding claim 49, the at least one damping element 24 overhangs the outside of a casing surface 5 of the flange 8 on the outside (See Col. 4, lines 8 – 30, See Fig. 1).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 33, 34, 36, 37 and 39 – 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Casler (5,015,926) in view of Sakakibara et al (4,724,711).

Art Unit: 2855

Regarding claim 33, Casler discloses all of the limitations of these claims except a plurality of sensors are arranged radially distributed around the flange. However, it would have been obvious to one of ordinary skill in the art to duplicate the sensors to provide a more efficient result. In re Harza, 274 F.2d 669, 124 USPQ 378 (CCPA 1960).

Regarding claims 34, 36 and 37, Casler discloses all of the limitations of these claims except that the strain sensor is arranged underneath the flange on the cylindrical housing, the flange having at least one constriction in the area of the incision, wherein the constriction is an at least partially radially circumferential constriction and holds the least one strain sensor. However, Sakakibara et al disclose a torque detector comprising a strain gage(s) 41a – 41d (See Figs. 1 and 4) located underneath a flange 37b on a housing 11 and flanges 37b, 37c having a constriction (See Fig. 1) in an area of an incision that holds the strain sensor (See Col. 2, lines 54 – 57 and Col. 4, lines 22 – 24 and 33 – 45, See Fig. 7).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Casler according to the teachings of Sakakibara et al for the purpose of, advantageously providing a torque detector using strain gages on a cantilever which is easily exchangeable (See Sakakibara et al, Col. 1, lines 55 – 59).

Regarding claims 39 – 41, Casler discloses all of the limitations of these claims except that force and/or a torque is determined by the at least one strain sensor and if a predetermined limit value is exceeded, an alarm signal or a switch-off signal can be generated and displayed on the indicating electronics device, the signals being recorded over time, in order to determine the operating state of the transmission, and being stored in the evaluation unit. However, in Sakakibara et al, strain gage units 140,143 detect the torque and when a signal indicative of a predetermined

limit value is outside a predetermined range an alarm signal is displayed on an indicating device 158 (See Col. 11, lines 3 – 16 and Col. 12, lines 1 – 8).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Casler according to the teachings of Sakakibara et al for the purpose of, providing an torque detector the enables the abnormality of the torque detector to be well judged and the easily corrected in an abnormality protective action (See Sakakibara et al, Col. 17, lines 49 – 53).

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hashimoto et al (4,865,143) disclose a torque detecting device.

Genster (6,091,174) discloses an electric motor.

Halen (5,442,965) discloses a torque delivering tool.

Levin et al (5,327,790) disclose a reaction sensing torque actuator.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Octavia Davis whose telephone number is 571-272-2176. The examiner can normally be reached on Mon through Thurs from 9 to 5. The examiner can also be reached on alternate Fridays.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz, can be reached on 571-272-2180. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2855

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

OD/2855

4/10/07


MICHAEL CYGAN, PH.D.
PRIMARY EXAMINER